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ABSTRACT

School interventions are often based on the assumption that such variables as self-concept and locus of control should have a meaningful impact on achievement. Yet research support for such influence is inconsistent. Because this inconsistency may be due to methodological problems, a study was conducted which used path analysis to determine the relative influence of self-concept and locus of control on achievement, while controlling for other influences. Data were obtained from a sample of the high school seniors (N=22,660) from High School and Beyond, a nationally representative longitudinal study of educational efforts. Variables representing race, family background, intellectual ability, self-concept, locus of control, and achievement were entered into a path model, which was solved using a series of multiple regression analyses. The results suggest that intellectual ability has the strongest impact on achievement, and that locus of control also has a meaningful impact. General self-concept seemed to have a meaningful impact on locus of control, but no meaningful effect on achievement for this age group. These findings suggest that, at least for high school students, the improvement of general self-concept may not be an effective means of improving achievement. Programs designed to produce a more internal locus of control, however, may have a positive impact on achievement. (NRB)

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Effects of Self-Concept and Locus of Control on Achievement

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Effects of Self-Concept and Locus of Control on Achievement

School interventions are often based on the assumption that psychological variables such as self-concept and locus of control should have a meaningful impact on achievement. Yet research support for such influences is inconsistent. For example, many researchers have suggested that general self-concept has a meaningful impact on achievement, while others have maintained that the influence is from achievement to general self-concept. Still others have suggested that there is no meaningful influence from achievement to self-concept or from self-concept to achievement, but rather that the observed relation is likely spurious (e.g., Maruyama, Rubin, & Kingsbury, 1981; Pottebaum, Keith, & Ehly, 1984). Locus of control research has been somewhat more consistent, and suggests that locus of control may have a meaningful influence on student achievement (e.g., Hartson, 1983).

Much of the confusion in such research may be due to methodological problems. Variables such as self-concept, locus of control, and achievement are not generally amenable to experimental control (i.e., random assignment). Yet despite well known flaws in using experimental methods with nonexperimental data (cf., Kerlinger, in press), many researchers have continued to use experimental methods in such research. Another flaw with much of the research is that relevant background influences have

been left uncontrolled. Some researchers, using more appropriate techniques, have suggested that socioeconomic status and ability may influence both self-concept and achievement, with the observed relation between self-concept and achievement simply the spurious by-product of this influence (Maruyama et al., 1981). Obviously, such variables should be controlled.

The study described here used path analysis, a more appropriate method for use with nonexperimental data (Keith, 1984; Cohen & Cohen, 1983), to determine the relative influence of self-concept and locus of control on achievement, while controlling for other important influences. Subjects were drawn from the senior sample of High School and Beyond, a massive, nationaly representative longitudinal study of educational effects. All seniors who answered a question concerning their ethnic background were used in these analyses (N=22660).

Variables representing race, family background (SES), intellectual ability, self-concept, locus of control, and achievement were entered into a path model, which was solved using a series of multiple regression analyses. The self-concept and locus of control scales were only short composites, but additional analyses support their reliability and validity. The path model makes explicit the assumption that the direction of influence is from ability, to self-concept, to locus of control, and finally to achievement.

Results, shown in Figure 1, suggest that intellectual ability has the strongest impact on achievement, and that locus of control also has a meaningful impact (with internals achieving at a higher level even after background influences are controlled).

Insert Figure 1 about here

General self-concept, on the other hand, seems to have no meaningful effect on achievement for this age group. Self-concept does, however, seem to have a meaningful impact on locus of control, with a higher self-concept leading to a more internal locus. Still, this influence on locus of control was not as strong as that from intellectual ability.

Our findings suggest that, at least at the high school level, the improvement of general self-concept may not be a fruitful means of improving achievement (although the improvement of self-concept may be a worthwhile goal in itself). On the other hand, it appears that programs designed to produce a more internal locus of control, if successful, may also have a positive impact on achievement. It is important to remember, however, that these results, while based on a nationally representative sample, pertain primarily to high school seniors, and to essentially normal students. A different pattern of influences may well be found with exceptional populations or with younger

age groups.

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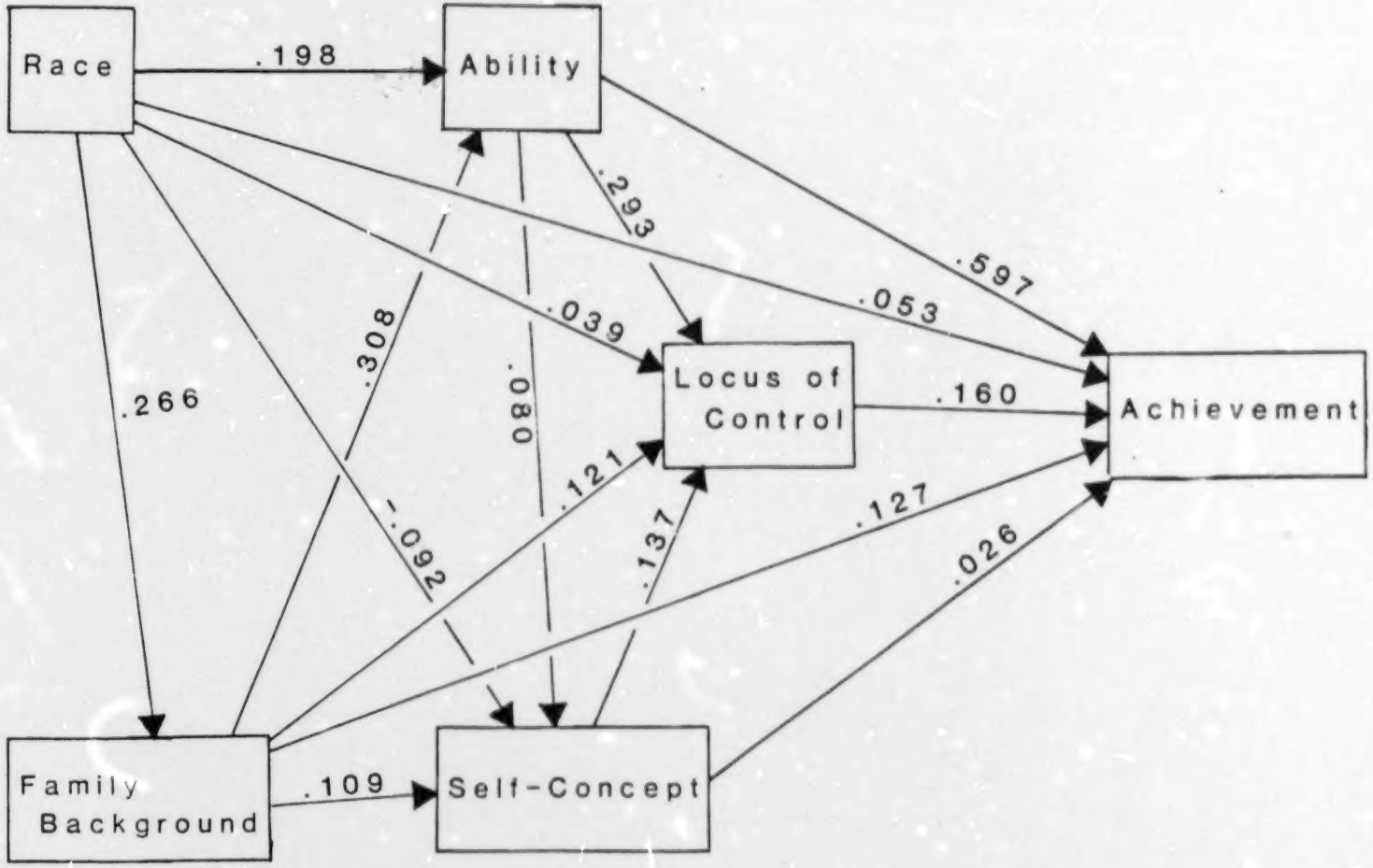
Figure Caption

Figure 1. Effects of Race, Family Background, Ability, Self-Concept, and Locus of Control on high school seniors' Academic Achievement. All paths are standardized coefficients, where ± 1.00 would represent complete influence.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Ability
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Family
Background
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Self-Concept